

I Claim:

1. A method of emulating a handheld video game platform comprising:
 - loading and executing an emulator program on a target platform different from said video game platform;
 - parsing and interpreting, with said emulator program, a binary image capable of being executed on said video game platform; and
 - generating an audio visual real time interactive presentation on said target platform in response to said interpreted binary image,
 wherein said binary image defines graphic characters using a predetermined format applicable to said handheld video game platform, and said emulator program reformats said graphic characters using a precomputed translation table.
2. A method of emulating a handheld video game platform comprising:
 - loading and executing an emulator program on a target platform different from said video game platform;
 - parsing and interpreting, with said emulator program, a binary image capable of being executed on said video game platform; and
 - generating an audio visual real time interactive presentation on said target platform in response to said interpreted binary image,
 wherein said emulator program displays images based on color palettes defined by said binary image that are changed during a display frame.
3. A method of emulating a handheld video game platform comprising:
 - loading and executing an emulator program on a target platform different from said video game platform;
 - parsing and interpreting, with said emulator program, a binary image capable of being executed on said video game platform; and
 - generating an audio visual real time interactive presentation on said target platform in response to said interpreted binary image,
 wherein said emulator program uses a jump table to parse op codes within the binary image, and uses a page table to selectively map memory access instructions into predetermined memory locations and/or function calls.

4. A method of emulating a handheld video game platform comprising:
loading and executing an emulator program on a target platform different from
said video game platform;

parsing and interpreting, with said emulator program, a binary image capable
of being executed on said video game platform; and

generating an audio visual real time interactive presentation on said target
platform in response to said interpreted binary image,

wherein said emulator program uses a BLIT operation to transfer graphics
information.

5. A method of emulating a handheld video game platform comprising:
loading and executing an emulator program on a target platform different from
said video game platform;

parsing and interpreting, with said emulator program, a binary image capable
of being executed on said video game platform; and

generating an audio visual real time interactive presentation on said target
platform in response to said interpreted binary image,

wherein the emulator program runs as a protected mode DOS program.

6. A method of emulating a handheld video game platform comprising:
loading and executing an emulator program on a target platform different from
said video game platform;

parsing and interpreting, with said emulator program, a binary image capable
of being executed on said video game platform; and

generating an audio visual real time interactive presentation on said target
platform in response to said interpreted binary image,

wherein the target platform comprises a seat-back display unit having a
predetermined display area, and said emulated program displays the visual part of said
audio visual presentation on only a subset of said seat-back display unit display area.

7. A method of emulating a handheld video game platform comprising:
loading and executing an emulator program on a target platform different from
said video game platform;

parsing and interpreting, with said emulator program, a binary image capable

of being executed on said video game platform; and

generating an audio visual real time interactive presentation on said target platform in response to said interpreted binary image,

wherein the emulator program includes a virtual liquid crystal display controller that models the handheld video game platform with a sequential state machine.

8. A method of emulating a handheld video game platform comprising:

loading and executing an emulator program on a target platform different from said video game platform;

parsing and interpreting, with said emulator program, a binary image capable of being executed on said video game platform; and

generating an audio visual real time interactive presentation on said target platform in response to said interpreted binary image,

wherein the emulator program accesses whether said audio visual presentation is running behind a timing model of the handheld video game platform, and selectively disables at least a part of a display update in response to said assessment while continuing to parse and interpret instructions within the binary image.

9. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein said binary image defines graphic characters using a predetermined format applicable to said handheld video game platform, and said processor under control of said emulation software reformats said graphic characters using a precomputed translation table.

10. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein said target platform under control of said emulation software displays images based on color palettes defined by said binary image that are changed during a display frame.

11. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein said target platform under control of said emulation software uses a jump table to parse op codes within the binary image, and uses a page table to selectively map memory access instructions into predetermined memory locations and/or function calls.

12. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein said target platform under control of said emulation software uses a BLIT operation to transfer graphics information.

13. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein the target platform executes said emulation software as a protected mode DOS program.

14. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein the target platform comprises a seat-back display unit having a predetermined display area, and said target platform under control of said emulation software displays the visual part of said audio visual presentation on only a subset of said seat-back display unit display area.

15. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein the target platform under control of said emulation software includes a virtual liquid crystal display controller that models the handheld video game platform with a sequential state machine.

16. A system that emulates in software, at least a portion of handheld video game platform hardware, said system comprising:

a target platform different from said handheld video game platform, said target platform including a processor that loads and executes emulation software, parses and interprets a binary image capable of being executed on said handheld video game platform, and generates an audio-visual real time interactive presentation in response to said interpreted binary image,

wherein the target platform under control of the emulation software models the timing of the handheld video game platform hardware, accesses whether said audio visual presentation is running behind the timing model of the handheld video game platform, and selectively disables at least a part of a display update in response to said assessment while continuing to parse and interpret instructions within the binary image.